

## 33. FIELD INCIDENCE OF SNAIL ON KHARIF GROUNDNUT

The groundnut crop is attacked by more than 90 arthropod pests in the world (Amin 1988). Besides arthropod pests Adimani (1976); Puttaswamy *et al.* (1981) and Panchabhavi and Hullatti (1983) recorded a molluscan pest, the snail, *Cryptozonia semirugata* (Beck) (Stylommatophora: Ariophantidae) as feeding on seedling of soyabean, groundnut seeds sown for germination and groundnut flowers along with many other cultivated crops. A new species of snail belonging to the same order has been observed for the first time in India feeding on groundnut flower.

During July to September 1989 the Kharif groundnut crop at Regional Research Station, Chiplima (Western Orissa) was infested by a minute snail, *Lanellaxis gracile* (Hotton) (Stylommatophora: Sublinidae) that fed on

groundnut flowers. Preliminary investigation indicated a loss of 10 to 15 per cent flower/plant, which ultimately impaired pod formation.

## ACKNOWLEDGEMENT

I thank Dr. Surya Rao, Zoological Survey of India, Calcutta for identification of the pest.

March 8, 1995

P.C. DASH

*Regional Research Station,  
Orissa University of Agriculture and Technology,  
Chiplima-768 026, Sambalpur, Orissa.  
Present address: Department of Entomology,  
Orissa University of Agriculture & Technology,  
Bhubaneswar-751 003, Orissa.*

## REFERENCES

- AMIN, P.W. (1988): Insect and mite pests and their control. *In*: P.S. Reddy (Ed) Groundnut, ICAR Pub. P. 392-452.
- ADIMANI, B.D. (1976): Studies on the insects of soyabean (*Glycine max* (L.) Merrill) with special reference to the bionomics and control of the pod borer, *Cydia patychora* Meyrick (Lepidoptera: Tortricidae). M.Sc Thesis, Univ. of Agricultural Sciences, Bangalore, P. 167.
- PANCHABHAVI, K.S. & V.B. HULLATTI (1983): Field incidence snail on groundnut kernels. *Curr. Res.* 12: 106.
- PUTTASWAMY, D.N.R. REDDY & L. KRISHNA NAIK (1981): Occurrence of *Cryptozonia semirugata* (Beck) (Stylommatophora: Ariophantidae) on cultivated plants. *Curr. Res.* 10: 61-62.

34. THE GROWTH PATTERN OF *PEGAEOPHYTON GARHWALENSIS* (BRASSICACEAE)

(With a text-figure)

Alpine vegetation of the Himalaya includes some curious and unusual forms like "hot house plants", "snow ball forms", "rosette forms", "cushion forms", "prostrate growth forms", "acaulescent habit", etc. These different morphological forms have adaptive value which ensures the survival of the plants in the harsh climatic conditions of the alpine zone (Ohba 1988, Rawat *et al.* 1994, Semwal *et al.* 1981).

*Pegaeophyton garhwalensis* Chowdhery et Singh (Brassicaceae), an endemic species of Garhwal Himalaya, shows a mat forming habit which is also adopted by several other alpine plants. This species shows a high degree of habitat specificity. The characteristic habitat of the species lies between 3700 to 4800 m a.s.l. where it grows among the large boulders with dense cover of moss on thin soil layer. *Pegaeophyton garhwalensis* shows characteristic growth pattern which is described below.

*Pegaeophyton garhwalensis* is a mat forming perennial plant. It was noticed at the end of the growing

season (September-October) that the branches carry a dense rosette of leaves with sheathing bases. The leaf sheaths encircle and protect two types of buds (telescopic shoots). In the next growing season after the snow-thaws in June, the buds grow and one of the buds grows up vertically projecting slightly above the moss layer. This shoot during the monsoon season (July-August) gives rise to a terminal lax rosette of leaves with no leaf sheaths. A few flowers (2-4) are borne in the centre of this rosette. This shoot can be called the shoot of definite growth or flowering shoot.

The second bud grows horizontally and a dense terminal rosette of leaves (with broad leaf sheaths) is borne at the terminal end. This shoot is thicker and smaller than the flowering shoot. The terminal rosette bears two buds between leaf sheaths which again gives rise to flowering shoot and vegetative shoot in the next growing season after the winter dormancy. This pattern of growth is followed each year.

In the flowering shoot a characteristic elongation takes